

**Notice of Allowability**

Application No.

09/977,048

Examiner

Chuck O. Kendall

Applicant(s)

CLARKE, STEPHEN

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/08/2006.
2. ☒ The allowed claim(s) is/are 1,3 - 11(now renumbered as 1 - 10).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 5/26/06
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
TUAN DAM  
SUPERVISORY PATENT EXAMINER

### Examiners Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel McLoughlin reg. 46,066 on 05/26/06.

Claims are being amended to overcome potential 101 issues.

#### **IN THE CLAIMS:**

2. Please amend claims 9 – 11, as follows:

##### **Claim 9 (Currently Amended)**

On line 1 replace, "A compiler for compiling" with, A system operative to compile.

##### **Claim 10 (Currently Amended)**

On line 1 replace, "A compiler" with, The system.

##### **Claim 11 (Currently Amended)**

On line 1 replace, "A compiler" with, The system.

### **Reasons for Allowance**

3. Examiner has reviewed and considered Applicants amendments as indicated in Applicant's response dated 05/08/06 and per Applicant's amendments claims 1, and 3 – 11 are now in condition for allowance.

The following is an Examiner's statement of reasons for allowance.

The prior art of record does not teach or fairly suggest at least the limitations of:

A method for compiling a computer program from a sequence of computer instructions, the method comprising:

“ for each set branch instruction, allocating the set branch instruction to a respective initial node in a dominator tree, said initial node being the node which contains the effect branch instruction corresponding to the set branch instruction;

determining an ancestor node in the dominator tree to which to migrate one or more of the branch instruction based on the live range of blocks so that registers holding target addresses in a live state are not overwritten when the computer instructions are executed; and migrating one or more said branch instruction to the ancestor node ”, and as best illustrated by figure 5, in such a manner as recited in independent claim 1.

“ executing a dominator tree constructor function in the computer system to read, in blocks said computer instructions including a plurality of first, set branch instructions

Art Unit: 2192

which each identify a target address for a branch and a plurality of second, effect branch instructions which each implement a branch to the target address specified in the associated set branch instruction and to define a set of target registers associated set with each block for holding target addresses for the set branch instruction in that block ", and as best illustrated by figure 5, in such a manner as recited in independent claim 6.

" a dominator tree constructor for reading, in blocks, said computer instructions including a plurality of first, set branch instructions which each identify a target address for a branch and a plurality of associated second, effect branch instructions which implement a branch to the target address specified in the associated set branch instruction and for allocating each set branch instruction to an initial node in a dominator tree, said initial node being located in the block which contains the corresponding effect branch instruction ", and as best illustrated by figure 5, in such a manner as recited in independent claim 9.

Therefore, all claims 1 and 3 – 11 are in condition for allowance.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


### **Correspondence Information**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-2723698. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-2723695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CK

  
TUAN DAM  
SUPERVISORY PATENT EXAMINER